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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,570	02/27/2002	Satoru Shoshi	02124/HG	8957

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NEW YORK, NY 10017-2023

EXAMINER

PRITCHETT, JOSHUA L

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 04/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/085,570

Applicant(s)

SHOSHI ET AL.

Examiner

Joshua L Pritchett

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_

Art Unit: 2872

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsufuji (US 6,480,250) in view of Sopko (US 6,436,541).

Regarding claim 1, Matsufuji teaches a film for optical applications comprising a hard coat (2), which comprises a resin cured by ionizing radiation (col. 4 lines 49-51) and has a thickness in a range of 2-20 microns (col. 5 lines 18-19). Matsufuji further teaches a low refractivity layer (4) which comprises a siloxane-based polymer (col. 7 lines 53-55) and has a refractive index in a range of 1.37-1.47 (col. 7 lines 41-42) and a thickness in a range of 60-180 nanometers (col. 7 lines 60-63). Matsufuji further teaches the application of the films on a substrate (1) with the hard coat (2) being adjacent the substrate and the low refractive index layer (4) being furthest from the substrate (Fig. 1). Matsufuji further teaches the inclusion of a high refractivity layer (3). Matsufuji lacks reference to multiple high refractivity layers and the refractive index of the high refractivity layers. Sopko teaches the use of two adjacent high

Art Unit: 2872

refractivity layers (49 and 51). Sopko teaches the layer closest to the substrate (49) has a refractive index between 1.7 and 1.95 (col. 10 lines 6-9) and a thickness between 30 and 120 nanometers (Table 4 column 3 (measurements given in Angstroms 1 nm = 10 Angstroms)). Sopko further teaches the other high refractivity layer having a refractive index between 1.6 and 1.7 (col. 10 lines 3-5) and a thickness between 5 and 70 nanometers (Table 4 column 1). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the single high refractivity layer of Matsufuji be multiple high refractivity layers as taught by Sopko for the purpose of reducing the amount of incident light reflected by the film by slowly changing the refractive index through the film. The application of the high refractivity layers using the same technique as the hard coat disclosed in Matsufuji would also have been within the ability of one ordinary skilled in the art and one would have been motivated to do so for the purpose of minimizing production costs by limiting the number of means used for depositing layers on a substrate.

Regarding claim 4, Matsufuji teaches the invention as claimed but lacks reference to the high refractivity layer being made of tin oxide doped with antimony. Sopko teaches the use of tin oxide doped with antimony as one of the high refractivity layers (col. 2 lines 20-25). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have a high refractivity layer of antimony doped tin oxide as taught by Sopko in the Matsufuji invention for the purpose of providing better antistatic properties in the Matsufuji film stack.

Regarding claim 5, Matsufuji teaches the low refractivity layer having antistatic properties (col. 3 lines 16-18). Matsufuji discloses the multilayer film stack having antistatic

Art Unit: 2872

properties therefore the low refractivity layer would have antistatic properties because it is included in the multilayer stack.

Regarding claim 6, Matsufuji teaches the inclusion of an antifouling layer (5) deposited on the low refractivity layer (Fig. 1). Matsufuji discloses a protective layer that has anti-smudge properties (col. 7 lines 66-67) which is taken to mean the same thing as an antifouling layer.

Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsufuji in view of Sopko as applied to claim 1 above, and further in view of Okamura (US 6,104,530).

Regarding claim 2, Matsufuji in combination with Sopko teaches the invention as claimed but lacks reference to the hard coat having antiglare properties. Okamura teaches the use of a hard coat having antiglare properties (col. 22 lines 56-57). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to equip the Matsufuji hard coat with the antiglare properties taught by Okamura for the purpose of reducing the amount of light reflection in the film stack.

Regarding claim 3, Matsufuji in combination with Sopko teaches the invention as claimed but lacks reference to the use of indium tin oxide at one of the high refractivity layers. Okamura teaches the use of indium tin oxide as a high refractivity layer in a film stack (col. 31 lines 49-50). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have one of the high refractivity layers in Matsufuji in combination with Sopko comprise indium tin oxide as taught by Okamura for the purpose of increasing the electromagnetic shielding of the film stack.

Art Unit: 2872

***Conclusion***

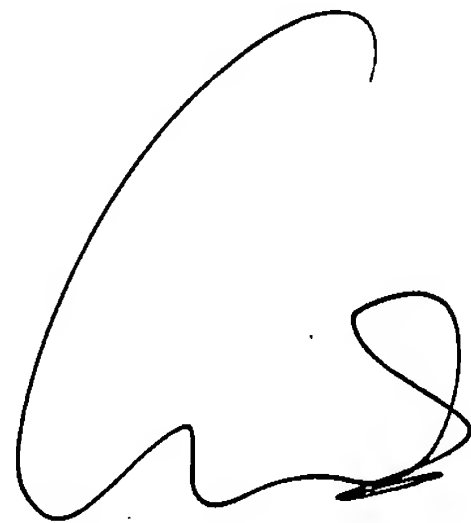
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua L Pritchett whose telephone number is 703-305-7917.

The examiner can normally be reached on Monday - Friday 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached on 703-308-1687. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JLP  
April 23, 2003

A handwritten signature in black ink, appearing to be 'Audrey Chang', written in a cursive style.

**Audrey Chang  
Primary Examiner  
Technology Center 2800**